

	A	B	C	D	E	F	G
1		<b>TABLE 1 - 12/28/11</b>					
2		<b>FIELD AND QC SAMPLING SUMMARY</b>					
3		<b>DIMOCK RESIDENTIAL GROUNDWATER SITE</b>					
4		<b>DIMOCK, SUSQUEHANNA COUNTY, PENNSYLVANIA</b>					
5	Lab	<b>Parameter/Method</b>	<b>Matrix</b>	<b>Field Samples</b>	<b>Bkgd</b>	<b>QC</b>	
6						<b>Dup</b>	<b>Trip<sup>1</sup> Blanks</b>
7	Ft. Meade	Alkalinity (SM 2320B) (Total Hardness, HCO <sub>3</sub> , CO <sub>3</sub> ) (2320B, 2340B)	drinking water	60	0	6	0
8	Ft. Meade	Alcohols: Ethanol, methanol, 1-propanol, 1-butanol, 2-butanol (8015D)	drinking water	60	0	6	0
9	Ft. Meade	Anions, Chloride, Bromide, Fluoride, Nitrate/Nitrite as N, Orthophosphorus as P, Sulfate as SO <sub>4</sub> (300.0)	drinking water	60	0	6	0
10	TechLaw	Bacteria (Fecal & total coliform, HPC)	drinking water	60	0	6	0
11	Isotech	d <sup>13</sup> C and d <sup>2</sup> H of methane (isotech)	drinking water	10	0	0	0
12	Isotech	Complete compositional analysis of headspace gas (isotech)	drinking water	10	0	0	0
13	Isotech	Diss. gases methane, ethane, ethene (isotech)	drinking water	10	0	0	0
14	TechLaw	Dissolved Gases, Methane, Ethane, & Ethene (RSK-175)	drinking water	60	0	6	0
15	TechLaw	Ethylene Glycol (8015M)	drinking water	60	0	6	0
16	?	DRO (8015M)	drinking water	60	0	6	0
17	?	GRO (8015M)	drinking water	60	0	6	0
18	TechLaw	Gamma Spec (K-40, Ra-226, Ra-228, Th-232, Th-234, U-234, U-235, U-238) (901.1)	drinking water	60	0	6	0
19	Ft. Meade	Glycols incl. 2-Butoxyethanol (8316)	drinking water	60	0	6	0
20	TechLaw	Gross Alpha/Beta (900.0)	drinking water	60	0	6	0
21	Ft. Meade	Metals: Al, Ca, Cr, Cu, Fe, Mg, Mn, Ni, Na, As, Se, Zn, Ti, Sr, Ba, Sn, Sb, Be, Cd, Co, Tl, U, V, K, Hg (200.8/245.1)	drinking water	60	0	6	0

	A	B	C	D	E	F	G
22	Ft. Meade	Metals: Al, Ca, Cr, Cu, Fe, Mg, Mn, Ni, Na, As, Se, Zn, Ti, Sr, Ba, Sn, Sb, Be, Cd, Co, Tl, U, V, K, Hg (200.8/245.1)	Filtered drinking water	60	0	6	0
23	TechLaw	Methylene Blue Active Substances (MBAS) (SM 5540C)	drinking water	60	0	6	0
24	Ft. Meade	Nitrate/Nitrite (353.2)	drinking water	60	0	6	0
25	TechLaw	Oil & Grease (HEM) (1664A)	drinking water	60	0	6	0
26	Ft. Meade	pH (9040C)	drinking water	60	0	6	0
27	Ft. Meade	Phosphorus, Total (365.1)	drinking water	60	0	6	0
28	TechLaw	Ra-226 (903.1)	drinking water	60	0	6	0
29	TechLaw	Ra-228 (904.0)	drinking water	60	0	6	0
30	Ft. Meade	Semi-Volatiles (TCL plus TICs) (CLP Trace plus TICs) (OLC03.2)	drinking water	60	0	6	0
31	Ft. Meade	Solids, Total Dissolved (TDS) (2540C)	drinking water	60	0	6	0
32	Ft. Meade	Solids, Total Suspended (TSS) (2540D)	drinking water	60	0	6	0
33	Isotech	Stable isotopes of water (O,H) (isotech)	drinking water	10	0	0	0
34	TechLaw	Turbidity, Nephelometric (180.1)	drinking water	60	0	6	0
35	TechLaw	2-Methoxyethanol (8015B)	drinking water	60	0	6	0
36	TechLaw	1-methylnaphthalene (8270 or equivalent)	drinking water	60	0	6	0
37	Ft. Meade	Volatiles Incl. Acrylonitrile (TCL plus TICs) (CLP Trace - 0.5 ug/L QL) (OLC03.2)	drinking water	60	0	6	1 per cooler
38		Notes:					
39		1. This QA sample will be an aqueous matrix.					
40		sampling equipment is used.					
41		3. Estimate based on 5 sampling days					
42		Key:					
43		Bkgd = Background	QA/QC = Quality assurance/quality control				
44		MS/MSD = Matrix Spike/Matrix Spike Duplicate	Sr = Strontium				

	A	B	C	D	E	F	G
45		CRQL = Contract-Required Quantitation limit.					
46		Dup = Duplicate					
47							
48							
49							

	H	I	J	K	L	M	N	O
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4	NIA							
5	Sample Summary			Total Field and QA/QC Analyses (not including MS/MSD) <sup>3</sup>				
6	Rinsate <sup>1,2</sup> Blanks	Field <sup>1</sup> Blanks	MS/MSD					
7	0	5	0	71				
8	0	5	3	71				
9	0	5	0	71				
10	0	5	0	71				
11	0	0	0	10				
12	0	0	0	10				
13	0	0	0	10				
14	0	5	0	71				
15	0	5	0	71				
16	0	5	0	71				
17	0	5	0	71				
18	0	5	0	71				
19	0	5	0	71				
20	0	5	0	71				
21	0	5	6	71				

	H	I	J	K	L	M	N	O
22	0	5	6	71				
23	0	5	0	71				
24	0	5	0	71				
25	0	5	0	71				
26	0	5	0	71				
27	0	5	0	71				
28	0	5	0	71				
29	0	5	0	71				
30	0	5	3	71				
31	0	5	0	71				
32	0	5	0	71				
33	0	0	0	10				
34	0	5	0	71				
35	0	5	0	71				
36	0	5	0	71				
37	0	5	3	71 + Trip Blanks for Coolers				
38								
39								
40								
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	H	I	J	K	L	M	N	O
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	A	B	C	D	E	F	G	H
1	<b>TABLE 2 - 12/28/11</b>							
2	<b>SAMPLE ANALYTICAL REQUIREMENTS SUMMARY</b>							
3	<b>DIMOCK RESIDENTIAL GROUNDWATER SITE</b>							
4	<b>DIMOCK, SUSQUEHANNA COUNTY, PENNSYLVANIA</b>							
5	<b>Analytical parameter and Method</b>		<b>Matrix</b>		<b>Sample Preservation</b>		<b>Holding Time</b>	
6								
7	Alcohols: Ethanol, methanol, 1-propanol, 1-butanol, 2-butanol (8015D)		drinking water		Ice, 6°C		7 days	
8	Alkalinity (2320B, 2340B)		drinking water		Ice, 6°C		14 days	
9	Anions: Chloride, Bromide, Fluoride, Nitrate/Nitrate as N, Orthophosphorus as P, Sulfate as SO4 (300.0)		drinking water		Ice, 6°C		28 days	
10	Bacteria (Fecal & total coliform, HPC)		drinking water		Ice, 4°C (.008% Na2S2O3 if residual Cl- present)		6 hours	
11	d13C and d2H of methane (Isotech)		drinking water		Ice, 4°C, biocide pill in sample container		6 months	
12	Complete compositional analysis of headspace gas (isotech)		drinking water		Ice, 4°C, biocide pill in sample container		6 months	
13	Diss. gases methane, ethane, ethene (isotech)		drinking water		Ice, 4°C, biocide pill in sample container		6 months	
14	Dissolved Gases, Methane, Ethane, & Ethene (RSK-175)		drinking water		pH<2 with HCl and cool with ice, 4°C		7 days	
15	Ethylene Glycol (8015M)		drinking water		Ice, 4°C		7 days	
16	DRO (8105M)		drinking water		Ice, 4°C		7 days extract; 40 days analysis	
17	GRO (8105M)		drinking water		pH<2 with HCl and cool with ice, 4°C		14 days	
18	Gamma Spec (K-40, Ra-226, Ra-228, Th-232, Th-234, U-235, U-238) (901.1)		drinking water		pH<2 with HNO3 and cool with ice, 4°C		6 months	
19	Glycols incl. 2-Butoxyethanol (8316)		drinking water		Ice, 6°C		7 days	
20	Gross Alpha/Beta (900.0)		drinking water		pH<2 with HNO3 and cool with ice, 4°C		6 months	
21	Metals: Al, Ca, Cr, Cu, Fe, Mg, Mn, Ni, Na, As, Se, Zn, Ti, Sr, Ba, Sn, Sb, Be, Cd, Co, Tl, U, V, K, Hg (200.8/245.1)		drinking water		pH<2 with HNO3 and cool with ice, 4°C		6 months	
22	Metals: Al, Ca, Cr, Cu, Fe, Mg, Mn, Ni, Na, As, Se, Zn, Ti, Sr, Ba, Sn, Sb, Be, Cd, Co, Tl, U, V, K, Hg (200.8/245.1)		(filtered) drinking water		pH<2 with HNO3 and cool with ice, 4°C		6 months	
23	Methylene Blue Active Substances (MBAS) (SM 5540C)		drinking water		Ice, 4°C		48 hours	
24	Nitrate/Nitrite (Total N) (353.2)		drinking water		pH<2, H2SO4, and cool with ice, 4°C		7 days	

	A	B	C	D	E	F	G	H
25	Oil & Grease (HEM) (1664A)		drinking water		pH<2, H2SO4, and cool with ice, 4°C		28 days	
26	pH (9040C)		drinking water		Ice, 6°C		As soon as possible	
27	Phosphorus, Total (365.1)		drinking water		Ice, 6°C		28 days	
28	Ra-226 (903.1)		drinking water		pH<2 with HNO3 and cool with ice, 4°C		6 months	
29	Ra-228 (904.0)		drinking water		pH<2 with HNO3 and cool with ice, 4°C		6 months	
30	Semi-Volatiles (TCL plus TICs) (OLC03.2)		drinking water		Ice, 6°C		7 days	
31	Solids, Total Dissolved (TDS) (SM 2540C)		drinking water		Ice, 6°C		7 days	
32	Solids, Total Suspended (TSS) (SM 2540D)		drinking water		Ice, 6°C		7 days	
33	Stable isotopes of water (O,H) (Isotech)		drinking water		Ice, 4°C		6 months	
34	Turbidity, Nephelometric (180.1)		drinking water		Ice, 4°C		48 hours	
35	2-Methoxyethanol (8015B)		drinking water		Ice, 6°C		7 days	
36	1-methylnapthalene (8270 or equivalent)		drinking water		Ice, 6°C		7 days	
37	Volatiles (TCL plus TICs) (CLP Trace - 0.5 ug/L QL) (OLC03.2) incl. Acrylonitrile		drinking water		2 drops of 1:1 HCl, pH<2, Ice, 6°C		7 days	
38	Note: Analyses will be combined into sample bottles as applicable/appropriate based on determination by lab(s)							
39	KEY:							
40	Celsius		milliliter					
41	C14 = Carbon 14		= Sodium					
42	CLP = Contract Lab		potential					
43	D13C = delta of		QL =					
44	D2H = delta of		Sr =					
45	Acid		Target					
46	density		Tentativel					
47	HN03 = Nitric Acid		microgra					
48	Heterotrophic		paramete					

	I	J	K	L	M
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2					
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5	Sample Container(s)			Procurement	Number
6				Source or Lab	
7	Three 40-ml glass vials (Fill to capacity with no head space)			Ft. Meade	3
8	One 500-ml HDPE			Ft. Meade	1
9	One 500-ml HDPE			Ft. Meade	1
10	125 ml Pre-sterilized polypropylene			Tier 4	1
11	one 1-L poly/TBD*			Tier 4	1
12	one 1-L poly/TBD*			Tier 4	1
13	one 1-L poly/TBD*			Tier 4	1
14	One 40-ml glass vial			Tier 4	1
15	Three 40-ml glass vials (Fill to capacity with no head space)			Tier 4	3
16	Two 1-Liter amber glass jars with teflon-lined lids				2
17	Three 40-ml glass vials (Fill to capacity with no head space)				3
18	One 1-Liter HDPE			Tier 4	1
19	Three 40-ml glass vials (Fill to capacity with no head space)			Ft. Meade	3
20	One 1-Liter HDPE			Tier 4	1
21	One 1-Liter HDPE			Ft. Meade	1
22	One 1-Liter HDPE			Ft. Meade	1
23	One 500-ml HDPE			Tier 4	1
24	Two 1-Liter amber glass jars with teflon-lined lids			Ft. Meade	2

	I	J	K	L	M
25	One 1-Liter amber glass jars with teflon-lined lids			Tier 4	1
26	One 250-ml HDPE			Ft. Meade	1
27	One 400-ml HDPE			Ft. Meade	1
28	One 1-Liter HDPE			Tier 4	1
29	One 1-Liter HDPE			Tier 4	1
30	Two 1-Liter amber glass jars with teflon-lined lids			Ft. Meade	2
31	One 500-ml HDPE			Ft. Meade	1
32	One 500-ml HDPE			Ft. Meade	1
33	one 1-L poly/TBD*			Tier 4	1
34	One 250-ml HDPE			Tier 4	1
35	Two 1-Liter amber glass jars with teflon-lined lids			Tier 4	2
36	Two 1-Liter amber glass jars with teflon-lined lids			Tier 4	2
37	Six 40-ml glass vials w/Teflon lined cap (no head space)			Ft. Meade	6
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